An Overview of Newfoundland and Labrador Petroleum Exploration

Recoverable resources of 2.1 billion barrels of oil, 5.7 trillion cubic feet of natural gas and 309 million barrels of natural gas liquids have been discovered in the Jeanne d’Arc Basin area of the Grand Banks of Newfoundland, with an additional 4.2 trillion cubic feet of natural gas and 123 million barrels of natural gas liquids located offshore Labrador. Production, currently at about 140,000 bopd, could reach 350,000 to 450,000 bopd within the next five to six years. These resources have been discovered by the drilling of only 127 exploration wells that are predominantly concentrated within the Mesozoic sediments of Jeanne d’Arc Basin, although some 20 other basins and sub-basins ranging in age from Early Paleozoic to Cenozoic are located in and around Newfoundland and Labrador. Recent landsale results, combined with the locations of seismic surveys, indicate that exploratory drilling is about to revisit areas such as the Flemish Pass and the Southern Grand Banks that have seen very little action since the Jeanne d’Arc Basin became the focus of activity in the early 1980s. A development plan has also been submitted for one field in the western Newfoundland onshore area. This paper provides an overview of the geology and successful play concepts, and presents new hydrocarbon play concepts that may be pursued in several of the more lightly explored basins.